DOCUMENT RESUME

ED 318 830 UD 027 424

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TITLE The REACH-6 Project: Improving Instructional Quality in Low Performing Houston ISD Elementary Schools.
INSTITUTION Houston Independent School District, TX. Dept. of Research and Evaluation.
PUB DATE 90
NOTE 14p.
PUB TYPE Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement; Educationally Disadvantaged; *Elementary Education; Enrichment Activities; Grade 3; Grade 4; Grade 5; Inservice Teacher Education; *Instructional Improvement; Parent Participation; Program Effectiveness; Scores; Self Esteem; *Standardized Tests; *Student Attitudes; *Student Improvement; Teaching Methods; Urban Education
IDENTIFIERS *Houston Independent School District TX

ABSTRACT

The REACH-6 program was a concerted effort by the Houston (Texas) school district to revamp the instructional quality in six of its elementary schools, with the primary purpose of improving the schools' student academic performance. This report describes the academic performance of the students in the REACH-6 program on the TEAMS and MAT-6 tests between 1986 and 1989. Several instructional activities, resources, and educational opportunities were offered to schools in order to facilitate the following improvements: (1) the development of effective building level leadership; (2) the use of effective teaching strategies; (3) the infusion of high expectations into the schools; (4) the improvement of student motivation to learn; and (5) the enhancement of parental involvement in school activities. The findings for each school are discussed separately; and each grade cohort, from third through fifth, is also discussed separately. The following evaluation points are addressed in this report: (1) the percentages of students passing the TEAMS each year; (2) the changes in the percent of students passing the TEAMS each year; (3) statistically significant differences between 1986-87 and 1988-89 TEAMS passing rates; and (4) the mean grade equivalent scores of the students each year. Overall, the findings indicate that the program was instrumental in improving the performance of students in the program schools. Generally, it seems that the grade that had the largest gains from the program was the third grade cohort. Twelve figures and 12 tables are included. (JS)

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The REACH–6 Project:

Improving Instructional Quality in Low Performing Houston ISD Elementary Schools

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UD 027 424

THE REACH-6 PROJECT:
IMPROVING INSTRUCTIONAL QUALITY IN LOW PERFORMING HOUSTON ISD ELEMENTARY SCHOOLS, 1988-1989

The Reach-6 program was a concerted effort by the District to revamp the instructional quality in six of its elementary schools, with the primary purpose of improving the schools' student performance. This report describes the academic performance of the students in the program schools between 1986 and 1989. The analysis of student performance on the TEAMS and the MAT-6 tests indicates that the program was instrumental in improving the performance of students in the program schools.

The implementation of the REACH-6 project in HISD has spanned the last three academic years (1986-89). The program was a planned effort to boost the quality of instruction in six District elementary schools, through the pursuit of educational activities, which address the effective schools' correlates. Consequently, several instructional activities, resources, and educational opportunities were offered to all the six schools to facilitate the development of effective building level leadership, the use of effective teaching strategies, the infusion of high expectations into the schools, the improvement of student motivation to learn, and the enhancement of parental involvement in school activities. The six elementary schools were Chatham, Eighth Avenue, Pilgrim, Reynolds, Rhoads, and Shearn.

PROGRAM IMPLEMENTATION
OVERVIEW

The program schools were identified by the Texas Education Agency (TEA) in 1986 as falling within the bottom 5% of all Texas elementary schools, on the basis of the 1986 TEAMS test results. The Houston Independent School District was, therefore, mandated by the TEA to assist the schools to revamp their instructional programs. The TEA accreditation monitoring team visited the REACH-6 schools in April of 1987 to conduct a diagnostic survey of the elements most closely related to instructional quality on the respective campuses. A report was later issued in July, 1987 by the TEA, which cited a number of factors as causing the low performance in those schools. The areas of concern included the following: 1) unhealthy school climate; 2) lack of a cohesive and well focused building level planning; 3) lack of personnel to address the counseling and health needs of students; 4) lack of high expectations for student performance; 5) a need for a comprehensive staff development; 6) a need for increased parental and community involvement; and 7) a need for the re-evaluation of library resources and programs (TEA Accreditation Monitoring Report, HISD, July 1987).

During the initial year, the staff of the six schools developed campus action plans into Strategic Plans of Operations (SPO's), and embarked on numerous activities to improve instruction, campus climate, teacher morale, student self-concept and student motivation to learn. The schools later developed and enforced school-wide and classroom disciplinary rules and incentive programs for encouraging desired behaviors in their students. There were recognition awards for good behavior, good class attendance record, outstanding citizenship, and improved academic performance. Several of the preceding programs included fun activities, such as movies, ice-cream and pop-corn parties, and musical parties. The program principals began to meet regularly to share ideas on effective strategies for dealing with their building level problems.

Through the implementation of the Reach-6 program, the schools were provided with several opportunities and resources to address the problem areas cited by the TEA. The District made funds available for the procurement of a host of instructional resources such as new library books, tape recorders, social studies kits, language arts kits, reading kits, science and mathematics software and manipulatives, and overhead projectors. There were several teacher inservices—including the Consistency Management Training—which focused on instructional strategies, the use of manipulatives, discipline management, effective schools' correlates , the lesson cycle, classroom learning centers, incentive strategies, etc.

Furthermore, there were several other educational activities including: visits to the Briargrove Children's Literature Center, Impact II Reading projects, Writer-in-Residence Project, Shell 2 Math-Science/Say Yes Project, Field Excursions, Book-A-Thons, and the Metro-Transportation Project. Each of these educational activities addressed one or more of the effective schools' correlates. The need for parental and community involvement in school activities was addressed through a variety of programs. Examples of such programs included Volunteers In Public Schools program (VIPs), Open House activities, PTO meetings, various classes for parents, extended day programs, Project Adopt, Shell 2/Say Yes Math-Science project, and visitation invitations that were given to the parents of students by the respective schools.

EVALUATION DESIGN

The purpose of the evaluation was to assess the impact of the program on student performance on the TEAMS and MAT-6 tests, in the six schools since the 1986-87 school year. Specifically, the following evaluation questions were addressed by this report:

1) What are the percentages of the third and fifth grade students passing the TEAMS in the six program schools from 1986 to 1989?

2) What are the changes in the percent of the third and fifth grade cohorts passing the TEAMS in the six program schools betweem 1986-87 and 1988-89?

3) Are there any statistically significant differences between 1986-87 and 1988-89 TEAMS passing rates in mathematics, reading, social studies, and science for the REACH-6 third and fifth grade cohorts?

4) What are the mean grade equivalent scores of the third, fourth, and fifth grade cohorts in the program schools in 1987, 1988, and 1989?

Student test data used in this report consist of the TEAMS and MAT-6 test scores of 1986, 1987 and 1989. Other data for this report were collected in April and May of 1989 from program teachers and principals, through unstructured and informal interviews. A random sample of ten teachers were interviewed in each of the six program schools.

Since the Reach-6 project is a whole school program, it was felt pertinent that the effects of the program on the MAT-6 tests be examined to find out how far the impact of the program had gone beyond the acquisition of the skills in the minimum proficiency areas—measured by the TEAMS—to the overall curriculum. The analysis of student performance in the six program schools, therefore, followed the following steps: 1) a brief description of the overall by-grade performance of the students of each school on the TEAMS tests from 1986-1989; 2) an analysis of the performance of a three year cohort of first to third and third to fifth grade students on the TEAMS tests of 1986-87 and 1988-89; and 3) an analysis of the performance of a three year cohort of first to third, second to fourth, and third to fifth grade students on the MAT-6 tests of 1986-87, 1987-88, and 1988-89.

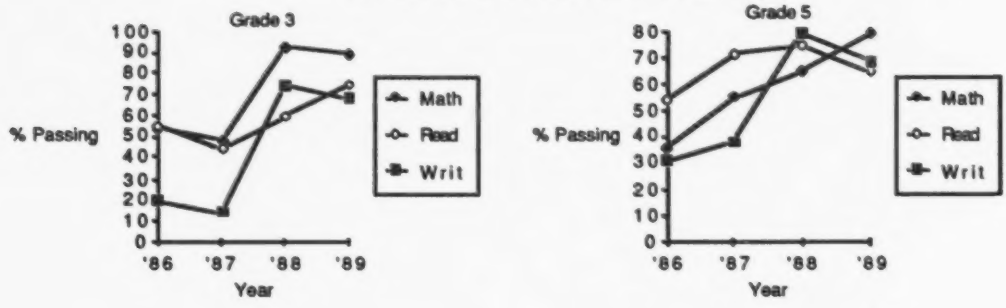
The cohorts were selected for a closer analysis, in an attempt to remove some of the possible impact of the high student mobility factor, which seemed to constrain the schools' ability to know the cumulative impact of the program on the performance of their students during the three years of program implementation. Only cohort members with the appropriate test data were included in the analysis. Each school was discussed separately from the others.

FINDINGS

Chatham Elementary

TEAMS Percent Passing

Figures 1 & 2
TEAMS: 1986-1989 Percent Passing



- The percent of the third and fifth grade students passing each sub-test increased between 1986-87 and 1988-89.

TEAMS: Changes in Percent Passing For Three-Year Cohorts (1986-89)

Table 1
Chatham: TEAMS Percent Passing & Scaled Score Analysis

1988-89 Grade		'86–87	'88–89	% Change	*Mean Scaled Score* 1986–87	1988–89	Paired "t" Value
3 (n=31)	Math	78	89	11	802	812	0.43
	Reading	49	81	32	727	799	3.10*
	Writing	70	65	-5	765	688	-3.04
5 (n=45)	Math	44	69	25	684	731	4.04*
	Reading	47	47	0	684	689	0.36
	Writing	14	61	47	613	691	3.92*

* Significant (P<.05)

- The third grade cohort experienced the following changes in percent passing between 1986-87 and 1988-89: mathematics, 11% increase; reading, 32% increase; writing, 5% decrease.
- Between 1986-87 and 1988-89, the fifth grade cohort's percent passing remained the same in reading but experienced increases of 25% in mathematics, and 47% in writing.
- The third grade cohort experienced a statistically significant increase in reading, while the fifth grade cohort experienced statistically significant increases on the mathematics, and writing sub-tests.

MAT-6 Performance of Three-Year Cohorts (1986-87—1988-89)

Table 2
Chatham Elementary
MAT-6 TCB Grade Equivalent Scores (1987-89)

		1987	1987	1988	1988	1989	1989
Grade 1988-1989	Sample Size	G.E. Norm	G.E.of Cohort	G.E.of Norm	G.E.of Cohort	G.E. Norm	G.E. of Cohort
3	30	1.7	1.7	2.7	2.8	3.7	3.3
4	34	2.7	2.6	3.7	4.0	4.7	4.7
5	30	3.7	2.9	4.7	4.0	5.7	5.3

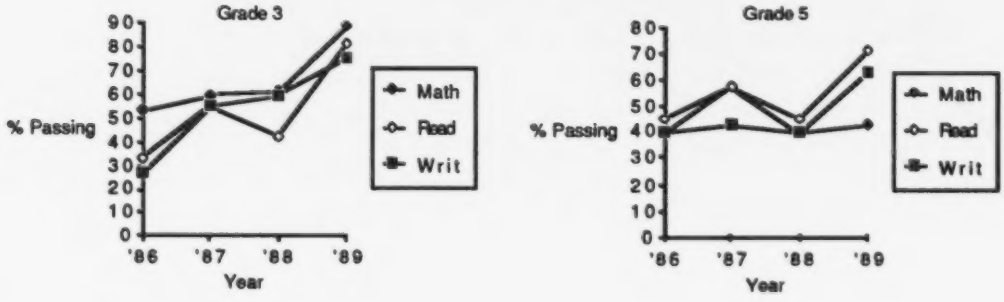
- The third grade cohort was on grade level at grades one and two, but was four academic months below grade level in 1989.

- The fourth grade cohort was one month below grade level in 1987, three months above grade level in 1988, and was on grade level in 1989.
- The fifth grade cohort performed between four and eight academic months below grade level in 1987, 1988, and 1989.

Eighth Avenue Elementary

TEAMS Percent Passing

Figures 3 & 4
TEAMS: 1986-1989 Percent Passing



- Overall, both the third and the fifth grade students experienced increases in the percent passing each sub-test since 1986.

TEAMS: Changes in Percent Passing For Three-Year Cohorts (1986-89)

Table 3
Eighth Avenue Elementary: TEAMS Percent Passing & Scaled Score Analysis

1988-89 Grade		'86–87	'88–89	% Change	*Mean Scaled Score* 1986–87	1988–89	Paired "t" Value
3 (n=14)	Math	57	71	14	713	723	0.26
	Reading	57	64	7	665	711	1.24
	Writing	63	57	-6	667	645	-0.74
5 (n=22)	Math	50	46	-4	691	673	-0.75
	Reading	46	55	9	656	676	1.33
	Writing	50	50	0	653	643	-0.39

* Significant (P<.05

- The third grade cohort experienced percentage increases of between 7% and 14% in mathematics and reading , while showing a 6% decrease in writing between 1986 and 1989.

- The fifth grade cohort's percent passing in writing remained at 50% for both 1986 and 1989, while experiencing a decline of 4% in mathematics, and an increase of 9% in reading.

MAT-6 Performance of Three-Year Cohorts (1986-87—1988-89)

Table 4
Eighth Avenue Elementary:
MAT-6 TCB Grade Equivalent Scores & Percentile Ranks

		1987	1987	1988	1988	1989	1989
Grade 1988-1989	Sample Size	G.E. Norm	G.E.of Cohort	G.E.of Norm	G.E.of Cohort	G.E. Norm	G.E. of Cohort
3	6	1.7	1.6	2.7	2.7	3.7	3.7
4	6	2.7	2.2	3.7	3.0	4.7	3.6
5	15	3.7	3.4	4.7	4.3	5.7	5.0

- The third grade cohort's score was one month below grade level in 1987, but was on grade level in 1988 and 1989.

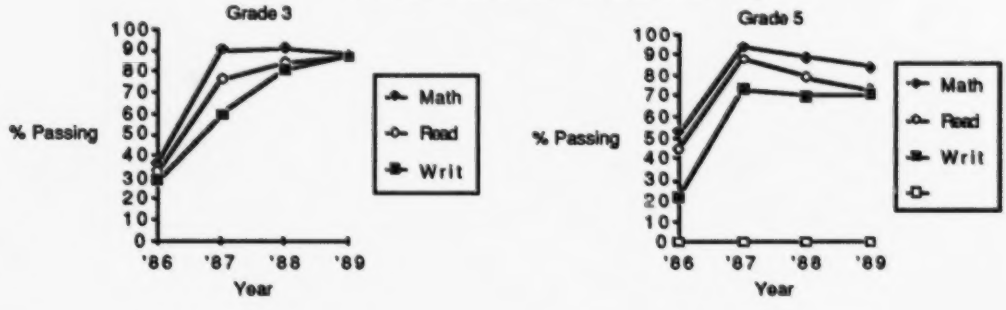
- The fourth grade cohort performed at five to eleven academic months below the grade level in 1987, 1988, and 1989.

- The fifth grade cohort's scores were between three and seven months below grade level in 1987, 1988, and 1989.

Pilgrim Elementary

TEAMS Percent Passing

Figures 5 & 6
TEAMS: 1986-1989 Percent Passing



- The percent of the third and fifth grade students passing each sub-test remained between 60-91% in 1987, 1988 and 1989.

TEAMS: Changes in Percent Passing For Three-Year Cohorts (1986-89)

Table 5
Pilgrim Elementary: TEAMS Percent Passing & Scaled Score Analysis

1988-89 Grade		'86–87	'88–89	% Change	*Mean Scaled Score* 1986–87	1988–89	Paired "t" Value
3 (n=31)	Math	100	100	0	900	886	-0.63
	Reading	90	97	7	885	871	-0.78
	Writing	84	100	16	831	876	1.91*
5 (n=45)	Math	89	78	-11	828	790	-2.48
	Reading	76	73	-3	781	748	-1.91
	Writing	69	71	2	743	736	-0.34

* Significant (P<.05).

- The third grade cohort experienced the following changes in percent passing between 1987 and 1989: reading, 7%; and writing, 16%.

- The fifth grade cohort's percent passing decreased 3% in reading and 11% in mathematics between 1986-87 and 1988-89.

- The increase in the third grade cohort's scaled scores in writing was statistically significant.

MAT-6 Performance of Three-Year Cohorts (1986-87—1988-89)

Table 6
Pilgrim Elementary
MAT-6 Mean TCB Grade Equivalent Scores & Percentile Ranks

		1987	1987	1988	1988	1989	1989
Grade 1988-1989	Sample Size	G.E. Norm	G.E.of Cohort	G.E.of Norm	G.E.of Cohort	G.E. Norm	G.E. of Cohort
3	7	1.7	2.0	2.7	3.2	3.7	4.0
4	16	2.7	2.9	3.7	3.9	4.7	5.8
5	31	3.7	3.5	4.7	4.9	5.7	7.0

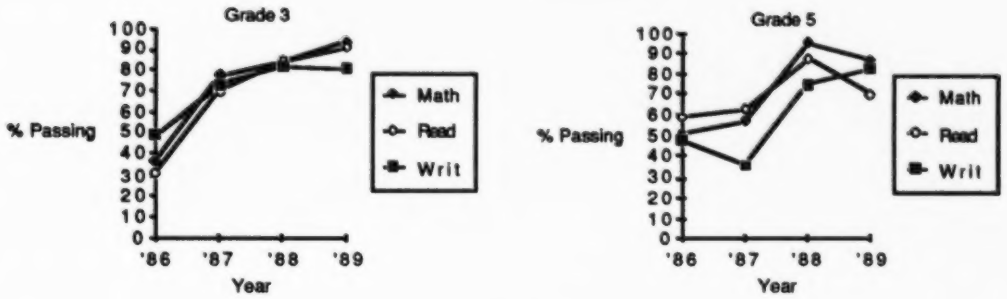
- The third and fourth grade cohorts had mean grade equivalent scores of between 2 and 11 academic months above grade level in 1987, 1988 and 1989.

- The fifth grade cohort was two months below grade level in 1987, 2 months above grade level in 1988, and 13 academic months above grade level in 1989.

Reynolds Elementary

TEAMS Percent Passing

Figures 7 & 8
TEAMS: 1986-1989 Percent Passing



- The percent of third and fifth grade students passing the sub-tests increased between 1986 and 1989.

TEAMS: Changes in Percent Passing For Three-Year Cohorts (1986-89)

Table 7
Reynolds Elementary TEAMS Percent Passing & Scaled Score Analysis

1988-89 Grade		'86–87	'88–89	% Change	*Mean Scaled Score* 1986–87	1988–89	Paired "t" Value
3 (n=51)	Math	77	92	15	772	850	4.40*
	Reading	45	82	37	671	833	8.88*
	Writing	75	75	0	727	748	1.16
5 (n=39)	Math	77	85	8	779	785	0.31
	Reading	69	64	-5	734	720	-1.09
	Writing	74	82	8	741	797	3.26*

* Significant (P<.05)

- Between 1986-87 and 1988-89, the third grade cohort's percent passing increased by 15% in mathematics, and by 37% in reading.

- The fifth grade cohort's percent passing increased by 8% in mathematics and writing, and a 5% decline in reading between 1987 and 1989.

- Overall, the third grade cohort experienced statistically significant increases in their scaled scores in mathematics and reading, while the fifth grade cohort experienced a statistically significant increase in writing.

MAT-6 Performance of Three-Year Cohorts (1986-87—1988-89)

Table 8
Reynolds Elementary
MAT-6 Mean TCB Grade Equivalent Scores & Percentile Ranks

		1987	1987	1988	1988	1989	1989
Grade 1988-1989	Sample Size	G.E. Norm	G.E.of Cohort	G.E.of Norm	G.E.of Cohort	G.E. Norm	G.E. of Cohort
3	42	1.7	1.7	2.7	2.8	3.7	4.9
4	37	2.7	2.6	3.7	4.2	4.7	4.6
5	24	3.7	3.5	4.7	4.2	5.7	5.9

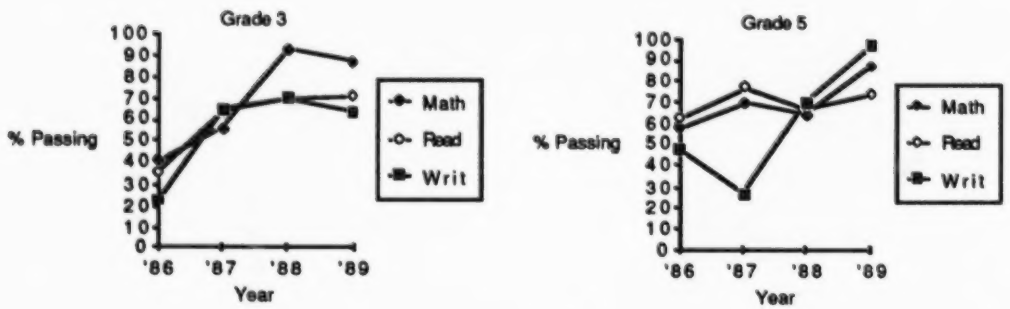
- The third grade cohort performed at grade level in 1987, one month above grade level in 1988, and twelve months above grade level in 1989.

- The fourth grade cohort's score was one month below grade level in 1987 and 1989, and five months above grade level in 1988.

Rhoads Elementary

TEAMS Percent Passing

Figures 9 & 10
Rhoads Elementary
TEAMS: 1986-1989 Percent Passing



- The percent of the third and fifth grade students passing the sub-tests increased between 1986 and 1989.

TEAMS: Changes in Percent Passing For Three-Year Cohorts (1986-89)

Table 9
Rhoads Elementary
TEAMS Percent Passing & Scaled Score Analysis

1988-89 Grade		'86–87	'88–89	% Change	*Mean Scaled Score* 1986–87	1988–89	Paired "t" Value
3 (n=49)	Math	84	92	8	805	807	0.12
	Reading	59	69	10	729	745	1.38
	Writing	71	65	-6	745	727	-0.99
5 (n=43)	Math	61	84	23	738	796	5.14*
	Reading	72	72	0	741	762	1.86*
	Writing	74	95	21	759	801	3.14*

* Significant (P<.05).

- The third grade cohort experienced the following changes in percent passing, between 1886-87 and 1988-89: mathematics, 8% increase; reading, 10% increase; and writing, 6% decrease.

- The fifth grade cohort's percent passing increased by 23% in mathematics and 21% in writing between 1986-87 and 1988-89.

- The fifth grade cohort experienced statistically significant increases in their scaled scores in mathematics and reading between 1986-87 and 1988-89.

MAT-6 Performance of Three-Year Cohorts (1986-87—1988-89)

Table 10 Rhoads
MAT-6 TCB Grade Equivalent & Percentile Ranks

		1987	1987	1988	1988	1989	1989
Grade 1988-1989	Sample Size	G.E. Norm	G.E.of Cohort	G.E.of Norm	G.E.of Cohort	G.E. Norm	G.E. of Cohort
3	50	1.7	1.8	2.7	2.5	3.7	3.7
4	32	2.7	2.6	3.7	4.0	4.7	4.7
5	46	3.7	3.3	4.7	4.5	5.7	5.5

- The third grade cohort's score was one month above grade level in 1987, two months below grade level in 1988, and was on grade level in 1989.

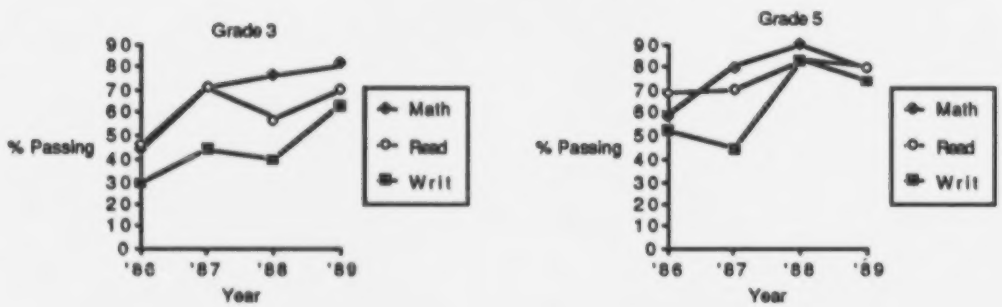
- The fourth grade cohort's score was one month below grade level in 1987, three months above grade level in 1988, and was on grade level in 1989.

- The fifth grade cohort's score was two to four academic months below grade level in 1987 and 1989.

Shearn Elementary

TEAMS Percent Passing

Figures 11 & 12
TEAMS: 1986-1989 Percent Passing



- The percent of the third and fifth grade students passing the sub-tests increased between 1986 and 1989.

TEAMS: Changes in Percent Passing For Three-Year Cohorts (1986-89)

Table 11
Shearn Elementary: TEAMS Percent Passing & Scaled Score Analysis

1988-89 Grade		'86–87	'88–89	% Change	*Mean Scaled Score* 1986–87	1988–89	Paired "t" Value
3 (n=34)	Math	85	71	-14	843	758	-4.12
	Reading	65	62	-3	727	704	-0.82
	Writing	77	59	-18	759	680	-2.72
5 (n=28)	Math	79	82	3	793	792	-0.03
	Reading	82	75	-7	763	742	-0.84
	Writing	61	75	14	749	744	-0.14

* Significant (P<.05).

- The third grade cohort experienced the following changes in percent passing between 1986-87 and 1988-89: mathematics, 14% decrease; reading, 3% decrease; and writing, 18% decrease.

- The fifth grade cohort experienced the following changes in their percent passing between 1986-87 and 1988-89: mathematics, 3% increase; writing, 14%increase; and reading, 7% decrease.

MAT-6 Performance of Three-Year Cohorts (1986-87—1988-89)

Table 12
Shearn Elementary
MAT-6 Mean TCB Grade Equivalent Scores & Percentile Ranks

		1987	1987	1988	1988	1989	1989
Grade 1988-1989	Sample Size	G.E. Norm	G.E.of Cohort	G.E.of Norm	G.E.of Cohort	G.E. Norm	G.E. of Cohort
3	22	1.7	1.9	2.7	3.2	3.7	3.9
4	12	2.7	2.9	3.7	4.4	4.7	5.8
5	22	3.7	3.5	4.7	4.8	5.7	6.2

- The third grade cohort's score was two months above grade level in 1987, five months above grade level in 1988, and two months above grade level in 1989.
- The fourth grade cohort 's score were 2-11 months above grade level between 1986-87 and 1988-89.
- The score of the fifth grade cohort was two months below grade level in 1987, one month above grade level in 1988, and five months above grade level in 1989.

CONCLUDING REMARKS

Overall, all the program schools made considerable achievement gains, which were perceived by the staff of the program schools as directly attributable to the the Reach-6 program (Opuni, 1988). These gains are seen much more clearly when student cohorts are examined. Generally, it seems that the grade that has shown the biggest gains from the program was the third grade cohort, since students of this group entered the schools at the same time when the program started.

It is hoped that by the time the first graders of 1986-87—who were in grade three during the 1988-89 school year—reach the fifth grade in 1990-91 academic year, there would have been an adequate critical mass of instructional quality in the programs of the Reach-6 schools that can help to sustain the momentum of achievement trend which is currently being experienced. This goal could, indeed, be easier to attain if the students in the program schools could be encouraged to minimize their mobility rates, by staying longer and reaping the cumulative benefits of the program.

Furthermore, due to the heavy investment in the training of the staff of the REACH-6 program, and the fact that the cornerstone of all high quality instructional programs is the instructional staff, adequate incentives should be provided for the program teachers to encourage them to remain in these schools, to ensure that the increased achievement trend that is steadily gaining roots in these schools, is not eroded.